

CLAIMS

1. Apparatus for processing a substrate having a thickness of 250 microns or less , including a chamber, plasma creation element or elements for creating a plasma in a zone of the chamber and an electrostatic chuck for retaining a substrate at a substrate location in or adjacent to the zone characterised in that the apparatus further includes a dark space shield disposed on the zone side of the chuck circumjacent or overlying the periphery of the location for preventing the presence of plasma between the shield and the periphery of a substrate in the location whilst allowing processing of the substrate.
2. Apparatus as claimed in Claim 1 wherein the shield is generally annular.
3. Apparatus as claimed in Claim 1 or Claim 2 wherein the shield is electrically conducting.
4. Apparatus as claimed in Claim 3 wherein the shield is grounded.
5. Apparatus as claimed in any one of the preceding claims wherein the chuck is also a plasma creating element.
6. Apparatus as claimed in any one of the preceding claims wherein the chuck is powered.
7. A method for processing a substrate having a thickness of 250 microns or less including electrostatically clamping the substrate to a chuck, creating a plasma adjacent the outwardly facing face of the clamped substrate and locating a dark space shield between the plasma and the periphery of the substrate to prevent the presence of plasma between the shield and the periphery whilst allowing processing of the substrate.

8. A method as claimed in Claim 2 wherein the substrate thickness is less than or equal to 100 microns. '

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